

Amendments to the Claims

Please amend Claims 21, 23, 25, 26, 27, 34-36, 38-40, 42, 44-46, 53-55, 57-59, 61, 63, 71-72, 74-76, 80-82, and 84-109. Please add new Claims 110-113. The Claim Listing below will replace all prior versions of the claims in this application:

Claim Listing

1-20: (Canceled)

21. (Currently amended) A portable wireless communications device comprising:
a portable housing;
a central processing unit mounted within the housing;
a wireless transceiver within the housing and coupled to the central processing unit for transmitting and receiving audio;
a wireless receiver within the housing and coupled to the central processing unit for receiving image data;
an active matrix liquid crystal display panel ~~within a display module~~ attached to the housing, the display panel having an active matrix circuit;
a light source that is optically coupled to the display panel, where light from the light source ~~is directed onto~~ backlights the display panel;
a display driver circuit within the housing and coupled to the central processing unit and the display active matrix circuit, the display driver circuit forming images on the display panel ~~from the received image data for viewing by a user~~;
a lens ~~within the display module~~ that optically couples an image displayed on the display panel to an eye of a user for viewing by the user; and
a battery carried by the housing for powering the central processing unit, the transceiver, the receiver, the display panel, the light source, and the display driver circuit.

22. (Canceled)

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23. (Currently amended) The device of Claim 21 ~~110~~ wherein the display module rotates relative to the housing.
24. (Previously presented) The device of Claim 21 wherein the housing comprises a head mounted support.
25. (Currently amended) The device of Claim 21 wherein the ~~active matrix liquid crystal display panel comprises is~~ a video display.
26. (Currently amended) The device of Claim 21 wherein the display panel has an array of at least 640 x 480 pixel electrodes.
27. (Currently amended) The device of Claim 21 further comprising a cholesteric liquid crystal element along an optical path between the display panel and the lens.
28. (Original) The device of Claim 21 further comprising a video processing circuit within the housing.
29. (Previously presented) The device of Claim 21 further comprising a port coupled to the housing for receiving a memory card.
- 30-31. (Canceled)
32. (Previously presented) The device of Claim 21 wherein the light source comprises red, green and blue light sources.
33. (Previously presented) The device of Claim 21 further comprising a modem within the housing.

34. (Currently amended) The device of Claim 21 wherein the display panel has an array of transistors that is formed with a silicon-on-insulator (SOI) structure.

35. (Currently amended) The device of Claim 21 wherein the display module comprises a reflector positioned around the light source.

36. (Currently amended) The device of Claim 21 wherein the display panel has a diagonal length of 0.7 inches or less.

37. (Canceled)

38. (Currently amended) The device of Claim 21 further comprising a flexible ribbon cable connecting the housing and the display module.

39. (Currently amended) The device of Claim 21 wherein the active matrix display panel and the lens are on a single optical axis.

40. (Currently Amended) A portable wireless telephone comprising:
a portable housing;
a central processing unit mounted within the housing;
a wireless receiver within the housing and coupled to the central processing unit for receiving audio and image data;
an active matrix liquid crystal display panel within a display module attached to the housing, the display panel having an active matrix circuit;
a light source that is optically coupled to the display such that light from the light source is directed onto backlights the display panel;
a display driver circuit within the housing and coupled to the central processing unit and the display active matrix circuit, the display driver circuit forming images on the display for viewing by a user panel from the received image data;

a lens ~~within the display module~~ that optically couples an image displayed on the display panel to an eye of a user for viewing by the user; and

a battery within the housing for powering the ~~central~~ processing unit, the receiver, the display panel and the driver circuit.

41. (Canceled)

42. (Currently amended) The telephone of Claim 40 111 wherein the display module rotates relative to the housing.

43. (Previously presented) The telephone of Claim 40 wherein the housing comprises a head mounted support.

44. (Currently amended) The telephone of Claim 40 wherein the ~~active matrix liquid crystal display panel comprises~~ is a video display.

45. (Currently amended) The telephone of Claim 40 wherein the display panel has an array of at least 640 x 480 pixel electrodes.

46. (Currently amended) The telephone of Claim 40 further comprising a cholesteric liquid crystal element along an optical path between the display panel and the lens.

47. (Previously presented) The telephone of Claim 40 further comprising a video processing circuit within the housing.

48. (Previously presented) The telephone of Claim 40 further comprising a port coupled to the housing for receiving a memory card.

49-50. (Canceled)

51. (Previously presented) The telephone of Claim 40 wherein the light source comprises red, green and blue light sources.

52. (Previously presented) The telephone of Claim 40 further comprising a modem within the housing.

53. (Currently amended) The telephone of Claim 40 wherein the display panel has an array of transistors that is formed with a silicon-on-insulator (SOI) structure.

54. (Currently amended) The telephone of Claim 40 111 wherein the display module comprises a reflector positioned around the light source.

55. (Currently amended) The telephone of Claim 40 wherein the display panel has a diagonal length of 0.7 inches or less.

56. (Canceled)

57. (Currently amended) The telephone of Claim 40 111 further comprising a flexible ribbon cable connecting the housing and the display module.

58. (Currently amended) The telephone of Claim 40 wherein the active matrix display panel and the lens are on a single optical axis.

59. (Currently amended) A method of operating a portable wireless communications device comprising:
powering a central processing unit, a wireless receiver, and a wireless transceiver, disposed within a portable housing, and an active matrix liquid crystal display panel within a display module attached to the housing, by a battery in the portable housing;
operating display control circuitry in the housing to display an image, the display control circuitry being connected to a display driver circuit; and

viewing through a lens within the display module an optically coupled image of the displayed image.

60. (Canceled)

61. (Currently amended) The method of Claim 59 further comprising rotating a display module containing housing the active matrix liquid crystal display and lens relative to the housing of the portable communications device.

62. (Canceled)

63. (Currently amended) The method of Claim 59 further comprising displaying a video display image.

64-70. (Canceled)

71. (Currently amended) A portable wireless telephone comprising:
a portable housing;
a central processing unit mounted within the housing;
a wireless receiver within the housing and coupled to the central processing unit that receives audio and image data;
an active matrix liquid crystal display panel coupled to the central processing unit and mounted within a display module, the display panel having an active matrix circuit;
a display driver circuit within the housing and coupled to the central processing unit and the display active matrix circuit, the display driver circuit forming images on the display for viewing by a user panel from the received image data;
a lens mounted within the display module that optically couples an image displayed on the display panel to an eye of a user for viewing by the user;
a light source mounted within the display module having red, green and blue elements and that directs red, green and blue light onto the display; and

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a battery within the housing for powering the ~~central~~ processing unit, the receiver, the display panel, and the display driver circuit.

72. (Currently amended) The telephone of Claim 71 112 wherein the display module rotates relative to the housing.

73. (Previously presented) The telephone of Claim 71 wherein the housing comprises a head mounted support.

74. (Currently amended) The telephone of Claim 71 wherein the ~~active matrix liquid crystal display panel comprises is~~ a video display.

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75. (Currently amended) The telephone of Claim 71 wherein the display panel has an array of at least 640 x 480 pixel electrodes.

76. (Currently amended) The telephone of Claim 71 further comprising a cholesteric liquid crystal element along an optical path between the display panel and the lens.

77. (Previously presented) The telephone of Claim 71 further comprising a video processing circuit within the housing.

78. (Previously presented) The telephone of Claim 71 further comprising a port coupled to the housing that receives a memory card.

79. (Previously presented) The telephone of Claim 71 further comprising a modem within the housing.

80. (Currently amended) The telephone of Claim 71 wherein the display panel has an array of transistors that is formed with a silicon-on-insulator (SOI) structure.

81. (Currently Amended) The telephone of Claim 71 112 wherein the display module comprises a reflector around the light source.

82. (Currently amended) The telephone of Claim 71 wherein the display panel has a diagonal length of 0.7 inches or less.

83. (Canceled)

84. (Currently amended) The telephone of Claim 71 112 further comprising a flexible ribbon cable connecting the housing and the display module.

85. (Currently amended) The telephone of Claim 71 wherein the ~~active matrix~~ display panel and the lens are on a single optical axis.

86. (Currently amended) The ~~portable communications~~ device of ~~claim~~ Claim 21 further comprising a servo coupled to the central processing unit and coupled to the display panel, the servo allowing adjustment of the position of the display panel relative to ~~a~~ the user's eyes.

87. (Currently amended) The ~~portable communications~~ device of ~~claim~~ Claim 21 comprising an external sensor module coupled to the central processing unit for providing data relating to an environment surrounding ~~a~~ the user.

88. (Currently amended) The ~~portable communications~~ device of ~~claim~~ Claim 21 comprising an internal sensor module coupled to the central processing unit for providing data relating to an environment between ~~a~~ the user and a protective layer.

89. (Currently amended) The ~~portable communications~~ device of ~~claim~~ Claim 21 comprising a lifesigns module coupled to the central processing unit for providing data regarding ~~a~~ the user's bodily condition.

90. (Currently amended) The portable communications device telephone of claim Claim 40 further comprising a servo coupled to the central processing unit and coupled to the display panel, the servo allowing adjustment of the position of the display panel relative to a the user's eyes.

91. (Currently amended) The portable communications device telephone of claim Claim 40 comprising an external sensor module coupled to the central processing unit for providing data relating to an environment surrounding a the user.

92. (Currently amended) The portable communications device telephone of claim Claim 40 comprising an internal sensor module coupled to the central processing unit for providing data relating to an environment between a the user and a protective layer.

93. (Currently amended) The portable communications device telephone of claim Claim 40 comprising a lifesigns module coupled to the central processing unit for providing data regarding a the user's bodily condition.

94. (Currently amended) The portable communications device telephone of claim Claim 71 further comprising a servo coupled to the central processing unit and coupled to the display panel, the servo allowing adjustment of the position of the display panel relative to a the user's eyes.

95. (Currently amended) The portable communications device telephone of claim Claim 71 comprising an external sensor module coupled to the central processing unit for providing data relating to an environment surrounding a the user.

96. (Currently amended) The portable communications device telephone of claim Claim 71 comprising an internal sensor module coupled to the central processing unit for providing data relating to an environment between a the user and a protective layer.

97. (Currently amended) The portable communications device telephone of claim Claim 71 comprising a lifesigns module coupled to the central processing unit for providing data regarding ~~a~~ the user's bodily condition.

98. (Currently amended) The portable communications device telephone of claim Claim 21 further comprising display control circuitry mounted on the housing and coupled to the display driver circuit, the display control circuitry allowing for user control of the display.

99. (Currently amended) The portable communications device telephone of claim Claim 40 further comprising display control circuitry mounted on the housing, the display control circuitry allowing for user control of the display.

100. (Currently amended) The portable communications device telephone of claim Claim 71 further comprising display control circuitry mounted on the housing and coupled to the display driver circuit, the display control circuitry allowing for user control of the display.

101. (Currently amended) The portable communications device telephone of claim Claim 21 further comprising ~~a~~ camera an imaging device coupled to the housing.

102. (Currently amended) The telephone of claim Claim 40 further comprising ~~a~~ camera an imaging device coupled to the housing.

103. (Currently amended) The telephone of claim Claim 71 further comprising ~~a~~ camera an imaging device coupled to the housing.

104. (Currently amended) The portable communications device of claim Claim 21 wherein the active matrix liquid crystal display panel comprises an array of transistor circuits and an array of pixel electrodes such that the active matrix circuit is bonded to an optically transmissive substrate with an adhesive layer.

105. (Currently amended) The telephone of claim Claim 40 wherein the ~~active matrix crystal display panel~~ comprises an array of transistor circuits and an array of pixel electrodes such that the active matrix circuit is bonded to an optically transmissive substrate with an adhesive layer.

106. (Currently amended) The telephone of claim Claim 71 wherein the ~~active matrix crystal display panel~~ comprises an array of transistor circuits and an array of pixel electrodes such that the active matrix circuit is bonded to an optically transmissive substrate with an adhesive layer.

107. (Currently amended) A portable wireless communications device comprising:
a portable housing;
a central processing unit mounted within the housing;
a wireless transceiver within the housing and coupled to the central processing unit for transmitting and receiving audio;
a wireless receiver within the housing and coupled to the central processing unit for receiving image data;
an active matrix liquid crystal display ~~within a display module~~ panel attached to the housing and coupled to the central processing unit, the display panel having an active matrix circuit including an array of transistor circuits and an array of pixel electrodes such that the active matrix circuit is bonded to an optically transmissive substrate with an adhesive layer;
a light source ~~within the display module~~ that is optically coupled to the display panel where light from the light source is directed onto backlights the display panel;
a display driver circuit within the housing and coupled to the central processing unit and the display active matrix circuit, the display driver circuit forming images on the display for viewing by a user panel from the received image data;
a lens that optically couples an image displayed on the display panel to an eye of a user for viewing by the user;

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display control circuitry mounted on the housing and coupled to the display driver circuit, the display control circuitry allowing for user control of the display;

a servo coupled to the central processing unit and coupled to the display panel, the servo allowing adjustment of the position of the display panel relative to a the user's eyes;

an external sensor module coupled to the central processing unit for providing data relating to an environment surrounding a the user;

an internal sensor module coupled to the central processing unit for providing data relating to an environment between a the user and a protective layer;

a lifesigns module coupled to the central processing unit for providing data regarding a the user's bodily condition;

~~a lens within the display module that optically couples an image displayed on the display to an eye of a user for viewing by the user;~~ and

a battery carried by the housing for powering the central processing unit, the transceiver, the receiver, the display panel, the light source, and the display driver circuit.



108. (Currently amended) The device of ~~claim~~ Claim 21 wherein the light source is positioned within the display module.
109. (Currently amended) The telephone of ~~claim~~ 40 Claim 111 wherein the light source is positioned within the display module.
110. (New) The device of Claim 21 wherein the display panel and the lens are housed within a display module attached to the housing.
111. (New) The telephone of Claim 40 wherein the display panel and the lens are housed within a display module attached to the housing.
112. (New) The telephone of Claim 71 wherein the display panel, the light source, and the lens are housed within a display module attached to the housing.

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113. (New) The device of Claim 107 wherein the display panel, the light source, and the lens are housed within a display module attached to the housing.
